

REMARKS

In the outstanding Final Office Action, claims 22-34 and 39-42 were rejected under 35 U.S.C. § 103(a) over KUBOTA et al. (U.S. Patent No. 7,023,992) in view of VALENCI et al. (U.S. Patent Application Publication 2003/0005279), and further in view of BLATTER et al. (U.S. Patent No. 5,878,135). Claims 35-37 were rejected under 35 U.S.C. §103(a) over KUBOTA, VALENCI and BLATTER, and further in view of SWIX et al. (U.S. Patent App. Pub. 2004/0250273). Claim 38 was rejected under 35 U.S.C. §103(a) over KUBOTA, VALENCI and BLATTER, and further in view of UTSUMI et al. (U.S. Patent No. 6,999,947). Applicant traverses each of the outstanding rejections.

With respect to claim 22, KUBOTA is directed to a data multiplexing device for transmitting scrambled packets corresponding to a subscribed-for data element. However, KUBOTA does not teach at least a multiplexer that multiplexes the first encrypted data, program-specific information, the tool list and the control graph.

In particular, as acknowledged in the Final Office Action, KUBOTA does not teach, *inter alia*, a control graph. Further, neither a packet identifier (PID) or a PID table in KUBOTA disclose a tool list as recited in claim 22.

That is, packet identifiers are supplied only to the subscriber authorization system 3, EPG system 4 and encoding system 7 (see column 8, lines 40-46). Additionally, a PID table is not multiplexed, and there would not be any useful purpose in modifying KUBOTA to multiplex the packet identifier (PID) table. Further, multiplexing/transmitting the PID table in KUBOTA would be superfluous as the encrypted work key K_w in KUBOTA is sent in a multiplexed transport stream so that

there is no need to further identify an association between the encrypted work key K_w and a PID at the end receiver.

Additionally, the Final Office Action asserts that it would be obvious to modify KUBOTA to "include the control graph generator" because "if the control graph is lost, missing or unable to be added, the receiving apparatus will be unable to process data packets". This logic is incorrect, as KUBOTA does not disclose a "control graph", and therefore would not encounter a problem of losing or missing a control graph.

The Final Office Action cited paragraphs [0002], [0003], [0028] and [0030] as well as Table 3A of VALENCI as teaching a control graph generator that produces a control graph indicating an instantiated location of the decoding tool in a receiving apparatus. However, paragraphs [0002] and [0003] are found in the background of VALENCI and merely disclose features of data packet cryptography information, a network interface device performing cryptography functions, and a table of cryptography information.

Further, the remaining cited portion of VALENCI does not teach a control graph indicating an instantiated location in a receiving apparatus, in that the cited portions of VALENCI are directed to an operating system rather than a transmission or receiving apparatus. That is, VALENCI teaches passing pointers between system layers of a single operating system. Paragraphs [0028] and [0030] of VALENCI teach base driver agent 235, which is a part of operating system 231 and uses a pointer to maintain security association (SA) table 236 to access cryptography information in the SA table. The base driver agent, pointers, and SA table disclosed by VALENCI are a part of operating system 231. Accordingly, VALENCI does not disclose a control graph generator, and

modification of KUBOTA with the cited teachings of VALENCI would not result in a combination that includes a control graph generator as recited in claim 22.

Additionally, the Final Office Action cited the disclosed SA table of VALENCI as teaching the control graph recited in claim 22. However, the SA table disclosed by VALENCI merely stores tables of cryptography information, but does not indicate the instantiated location of the decoding tool in the receiving apparatus.

In any event, it would not be possible to modify KUBOTA to obtain the combinations recited in Applicant's claims without rendering moot the teachings of KUBOTA. In this regard, KUBOTA is directed to sending encrypted scramble keys K_s' with data packets to a subscriber or receiver so that the scrambled data may be unscrambled. More specifically, KUBOTA teaches a pre-stored master key K_m to decrypt encrypted work key K_w' . The decrypted work key K_w is used to decrypt encrypted scramble key K_s' . Scramble key K_s is then used to decrypt transport stream packets of program data. In contrast, Applicant's independent claim 22 recites transmitting a control graph indicating the instantiated location of the decoding tool in the receiving apparatus. The Final Office Action relied upon VALENCI as teaching the features of a control graph generator as recited in claim 22. However, VALENCI teaches that a pointer is passed between system layers to access cryptography information associated with an SA table. To modify KUBOTA with VALENCI would nullify the purpose of KUBOTA sending a scramble key because the cryptography information necessary to perform cryptography operations on the data packet would already be located on the system at which the data packet was received.

Furthermore, the Final Office Action asserts that it would be obvious to modify KUBOTA to “include the control graph generator” because “if the control graph is lost, missing or unable to be added, the receiving apparatus will be unable to process data packets.” However, KUBOTA does not teach or suggest a control graph and is therefore not at risk of loss or inoperability of a control graph. The argument provided in the Final Office Action supporting the modification of KUBOTA with VALENCI does not explain why modification to KUBOTA would be necessary, but rather, merely explains why VALENCI obtains duplicate information from SA table 234 for use when information from SA table 236 is lost or inoperable. The system of KUBOTA could not be so modified to include such features without replacing the system wholesale with the features recited in Applicant’s claim 22.

Therefore, claim 22 is allowable, at least for each of the reasons set forth above.

It is additionally noted that the Final Office Action did not address separable arguments made with respect to claim 23 in Applicant’s previous Response, and it appears that not all of Applicant’s previous arguments have been fully considered. In this regard, independent claim 23 is allowable for reasons similar to the above-noted reasons for the allowability of claims 22. Additionally, there is no proper explanation provided in the rejection of claim 23 as to why KUBOTA would benefit from program-specific information recited in claim 23 (i.e., which includes the tool list, the control graph, the rights information, and a table denoting the correlation between the first encrypted data and a program number of the first encrypted data). Nor is there any proper explanation provided in the rejection of claim 23 as to why KUBOTA would benefit from multiplexing such program-specific information if it were provided.

Independent claims 29-31 recite features of a receiving apparatus that correspond to various of the above-noted features of the transmission apparatuses recited in independent claims 22-23. Insofar as corresponding or similar features are recited in each of claims 29-31, each of the independent claims now pending is allowable over the combination of KUBOTA, VALENCI and BLATTER.

For example, the Final Office Action relied upon column 23, lines 39-40 and 57-67 as well as column 23, line 60 through column 24, line 2 of KUBOTA as teaching a first controller that acquires a tool according to a tool identification acquired from the tool list, and instantiating the tool according to the control graph. However, the cited portions indicate a security module 24 for deciphering enciphered keys and descramblers for descrambling scrambled data streams. The cited portions of KUBOTA do not teach or suggest acquiring a tool according to a tool identification acquired from the tool list, let alone instantiating such a tool, or instantiating such a tool according to a control graph. Indeed, the Final Office Action acknowledged that KUBOTA does not teach a control graph.

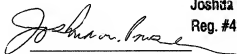
Accordingly, each of independent claims 22-23 and 29-31 is allowable, at least for each of the reasons set forth above. Each of dependent claims 24-28 and 32-42 is allowable at least for depending, directly or indirectly, from an allowable independent claim, as well as for additional reasons related to their own recitations. Accordingly, reconsideration and withdrawal of each of the outstanding rejections is respectfully requested.

If any extension of time is deemed to be necessary to maintain the pendency of the application, including any extension of time fees for entry of an Examiner's Amendment, the Patent and Trademark Office is hereby requested and authorization is hereby provided to charge any necessary fees to maintain the pendency of this application to Deposit Account No. 19-0089.

Should there be any questions, any representative of the U.S. Patent and Trademark Office is invited to contact the undersigned at the below-listed telephone number.

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